

3/25/2016
Ms. Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1

Knoxville TN 37932

Project Name: West Lake Landfill
Project #:
Workorder #: 1603071

Dear Ms. Cecilia Greene

The following report includes the data for the above referenced project for sample(s) received on 3/4/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

A Eurofins Lancaster Laboratories Company

WORK ORDER #: 1603071

Work Order Summary

CLIENT: Ms. Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

BILL TO: Ms. Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

PHONE: 865-675-3669
FAX: 865-675-3677
DATE RECEIVED: 03/04/2016
DATE COMPLETED: 03/17/2016

P.O. #
PROJECT # West Lake Landfill
CONTACT: Kelly Buettner

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	ENGWESA001	Passive S.E. RAD130/SKC
02A	ENGWESA005	Passive S.E. RAD130/SKC
03A	ENGWESA007	Passive S.E. RAD130/SKC
04A	ENGWESA008	Passive S.E. RAD130/SKC
05A	ENGWESA012	Passive S.E. RAD130/SKC
06A	Duplicate	Passive S.E. RAD130/SKC
07A	TRIP BLANK	Passive S.E. RAD130/SKC
08A	Lab Blank	Passive S.E. RAD130/SKC
09A	LCS	Passive S.E. RAD130/SKC
09AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY:



DATE: 03/17/16

Technical Director

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**LABORATORY NARRATIVE
Passive SE by Mod EPA TO-17
Auxier & Associates, Inc.
Workorder# 1603071**

Seven Radiello 130 (Solvent) samples were received on March 04, 2016. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	TO-17	ATL Modifications
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

To calculate ug/m³ concentrations in the Lab Blank and Trip Blank, a sampling duration of 21489 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

The Relative Percent Difference (RPD) of the LCS/LCSD exceeded acceptance limits for Naphthalene.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA001**Lab ID#: 1603071-01A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.10	0.11	0.11
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.22	0.14
Acetone	0.20	0.13	0.39	0.25
Benzene	0.40	0.25	0.55	0.34
Carbon Tetrachloride	0.10	0.074	0.55	0.41
Cyclohexane	0.10	0.092	0.11	0.099
Heptane	0.10	0.086	0.28	0.24
Hexane	0.10	0.076	0.32	0.24
Toluene	0.10	0.067	0.83	0.56
Tetrachloroethene	0.10	0.084	0.36	0.30
m,p-Xylene	0.10	0.071	0.27	0.19

Client Sample ID: ENGWESA005**Lab ID#: 1603071-02A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.099	0.12	0.12
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.40	0.25
Acetone	0.20	0.13	0.60	0.39
Benzene	0.40	0.25	0.57	0.36
Carbon Tetrachloride	0.10	0.074	0.52	0.38
Cyclohexane	0.10	0.092	0.10	0.094
Ethyl Benzene	0.10	0.073	0.11	0.082
Heptane	0.10	0.086	0.20	0.17
Hexane	0.10	0.075	0.29	0.22
Toluene	0.10	0.067	0.72	0.48
m,p-Xylene	0.10	0.071	0.29	0.20

Client Sample ID: ENGWESA007**Lab ID#: 1603071-03A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.098	0.15	0.15



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA007**Lab ID#: 1603071-03A**

2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.54	0.33
Acetone	0.20	0.13	1.0	0.64
Benzene	0.40	0.24	0.77	0.47
Carbon Tetrachloride	0.10	0.073	0.50	0.37
Cyclohexane	0.10	0.090	0.13	0.12
Ethyl Benzene	0.10	0.072	0.15	0.10
Heptane	0.10	0.084	0.23	0.20
Hexane	0.10	0.074	0.34	0.25
Toluene	0.10	0.066	0.87	0.58
m,p-Xylene	0.10	0.070	0.38	0.26
o-Xylene	0.10	0.075	0.12	0.088

Client Sample ID: ENGWESA008**Lab ID#: 1603071-04A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.093	0.11	0.099
2-Butanone (Methyl Ethyl Ketone)	0.10	0.059	0.42	0.25
Acetone	0.20	0.12	0.70	0.42
Benzene	0.40	0.23	0.79	0.46
Carbon Tetrachloride	0.10	0.069	0.54	0.37
Chloroform	0.10	0.062	0.11	0.070
Cyclohexane	0.10	0.086	0.11	0.098
Ethyl Benzene	0.10	0.068	0.11	0.074
Heptane	0.10	0.080	0.23	0.18
Hexane	0.10	0.070	0.36	0.26
Toluene	0.10	0.063	0.74	0.47
m,p-Xylene	0.10	0.066	0.29	0.19

Client Sample ID: ENGWESA012**Lab ID#: 1603071-05A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.099	0.10	0.10



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA012**Lab ID#: 1603071-05A**

2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.40	0.25
Acetone	0.20	0.13	0.53	0.34
Benzene	0.40	0.25	0.71	0.44
Carbon Tetrachloride	0.10	0.074	0.56	0.42
Cyclohexane	0.10	0.091	0.12	0.11
Ethyl Benzene	0.10	0.072	0.11	0.078
Heptane	0.10	0.085	0.20	0.17
Hexane	0.10	0.075	0.40	0.30
Toluene	0.10	0.067	0.70	0.47
m,p-Xylene	0.10	0.070	0.27	0.19

Client Sample ID: Duplicate**Lab ID#: 1603071-06A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2,4-Trimethylbenzene	0.10	0.10	0.15	0.15
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.23	0.15
Acetone	0.20	0.13	0.37	0.24
Benzene	0.40	0.25	0.63	0.40
Carbon Tetrachloride	0.10	0.074	0.56	0.42
Cyclohexane	0.10	0.092	0.12	0.11
Ethyl Benzene	0.10	0.073	0.12	0.090
Heptane	0.10	0.086	0.28	0.24
Hexane	0.10	0.076	0.38	0.29
Toluene	0.10	0.067	0.97	0.66
Tetrachloroethene	0.10	0.084	0.41	0.35
m,p-Xylene	0.10	0.071	0.34	0.24
o-Xylene	0.10	0.077	0.12	0.090

Client Sample ID: TRIP BLANK**Lab ID#: 1603071-07A**

No Detections Were Found.



Air Toxics

Client Sample ID: ENGWESA001

Lab ID#: 1603071-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031017sim	Date of Collection:	3/2/16 8:28:00 AM	
Dil. Factor:	1.00	Date of Analysis:	3/10/16 02:00 PM	
		Date of Extraction:	3/10/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.083	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.065	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.10	0.11	0.11
1,4-Dichlorobenzene	0.10	0.098	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.22	0.14
4-Methyl-2-pentanone	0.20	0.15	Not Detected	Not Detected
Acetone	0.20	0.13	0.39	0.25
Benzene	0.40	0.25	0.55	0.34
Carbon Tetrachloride	0.10	0.074	0.55	0.41
Chlorobenzene	0.10	0.073	Not Detected	Not Detected
Chloroform	0.10	0.066	Not Detected	Not Detected
Cyclohexane	0.10	0.092	0.11	0.099
Ethanol	1.0	0.49	Not Detected	Not Detected
Ethyl Acetate	0.40	0.26	Not Detected	Not Detected
Ethyl Benzene	0.10	0.073	Not Detected	Not Detected
Heptane	0.10	0.086	0.28	0.24
Hexane	0.10	0.076	0.32	0.24
Methyl tert-butyl ether	0.10	0.077	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.088	Not Detected	Not Detected
Styrene	0.10	0.082	Not Detected	Not Detected
Toluene	0.10	0.067	0.83	0.56
Tetrachloroethene	0.10	0.084	0.36	0.30
Trichloroethene	0.10	0.072	Not Detected	Not Detected
m,p-Xylene	0.10	0.071	0.27	0.19
o-Xylene	0.10	0.077	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20044 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130



Air Toxics

Client Sample ID: ENGWESA005

Lab ID#: 1603071-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031018sim	Date of Collection: 3/2/16 9:22:00 AM		
Dil. Factor:	1.00	Date of Analysis: 3/10/16 02:24 PM		
		Date of Extraction: 3/10/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.083	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.099	0.12	0.12
1,4-Dichlorobenzene	0.10	0.097	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.40	0.25
4-Methyl-2-pentanone	0.20	0.15	Not Detected	Not Detected
Acetone	0.20	0.13	0.60	0.39
Benzene	0.40	0.25	0.57	0.36
Carbon Tetrachloride	0.10	0.074	0.52	0.38
Chlorobenzene	0.10	0.073	Not Detected	Not Detected
Chloroform	0.10	0.066	Not Detected	Not Detected
Cyclohexane	0.10	0.092	0.10	0.094
Ethanol	1.0	0.49	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.073	0.11	0.082
Heptane	0.10	0.086	0.20	0.17
Hexane	0.10	0.075	0.29	0.22
Methyl tert-butyl ether	0.10	0.076	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.087	Not Detected	Not Detected
Styrene	0.10	0.081	Not Detected	Not Detected
Toluene	0.10	0.067	0.72	0.48
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
Trichloroethene	0.10	0.072	Not Detected	Not Detected
m,p-Xylene	0.10	0.071	0.29	0.20
o-Xylene	0.10	0.076	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20118 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130



Air Toxics

Client Sample ID: ENGWESA007

Lab ID#: 1603071-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031019sim	Date of Collection:	3/2/16 2:44:00 PM	
Dil. Factor:	1.00	Date of Analysis:	3/10/16 02:48 PM	
		Date of Extraction:	3/10/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.081	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.079	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.098	0.15	0.15
1,4-Dichlorobenzene	0.10	0.096	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.54	0.33
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.13	1.0	0.64
Benzene	0.40	0.24	0.77	0.47
Carbon Tetrachloride	0.10	0.073	0.50	0.37
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.065	Not Detected	Not Detected
Cyclohexane	0.10	0.090	0.13	0.12
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.15	0.10
Heptane	0.10	0.084	0.23	0.20
Hexane	0.10	0.074	0.34	0.25
Methyl tert-butyl ether	0.10	0.075	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.080	Not Detected	Not Detected
Toluene	0.10	0.066	0.87	0.58
Tetrachloroethene	0.10	0.083	Not Detected	Not Detected
Trichloroethene	0.10	0.071	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.38	0.26
o-Xylene	0.10	0.075	0.12	0.088

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20451 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: ENGWESA008

Lab ID#: 1603071-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031020sim	Date of Collection: 3/2/16 8:20:00 AM		
Dil. Factor:	1.00	Date of Analysis: 3/10/16 03:12 PM		
		Date of Extraction: 3/10/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.078	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.075	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.093	0.11	0.099
1,4-Dichlorobenzene	0.10	0.091	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.059	0.42	0.25
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	0.70	0.42
Benzene	0.40	0.23	0.79	0.46
Carbon Tetrachloride	0.10	0.069	0.54	0.37
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.062	0.11	0.070
Cyclohexane	0.10	0.086	0.11	0.098
Ethanol	1.0	0.46	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	0.11	0.074
Heptane	0.10	0.080	0.23	0.18
Hexane	0.10	0.070	0.36	0.26
Methyl tert-butyl ether	0.10	0.072	Not Detected	Not Detected
Naphthalene	0.10	0.19	Not Detected	Not Detected
Propylbenzene	0.10	0.082	Not Detected	Not Detected
Styrene	0.10	0.076	Not Detected	Not Detected
Toluene	0.10	0.063	0.74	0.47
Tetrachloroethene	0.10	0.079	Not Detected	Not Detected
Trichloroethene	0.10	0.067	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	0.29	0.19
o-Xylene	0.10	0.072	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21489 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: ENGWESA012

Lab ID#: 1603071-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031021sim	Date of Collection: 3/2/16 10:52:00 AM		
Dil. Factor:	1.00	Date of Analysis: 3/10/16 03:36 PM		
		Date of Extraction: 3/10/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.082	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.099	0.10	0.10
1,4-Dichlorobenzene	0.10	0.097	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.40	0.25
4-Methyl-2-pentanone	0.20	0.15	Not Detected	Not Detected
Acetone	0.20	0.13	0.53	0.34
Benzene	0.40	0.25	0.71	0.44
Carbon Tetrachloride	0.10	0.074	0.56	0.42
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.066	Not Detected	Not Detected
Cyclohexane	0.10	0.091	0.12	0.11
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.11	0.078
Heptane	0.10	0.085	0.20	0.17
Hexane	0.10	0.075	0.40	0.30
Methyl tert-butyl ether	0.10	0.076	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.081	Not Detected	Not Detected
Toluene	0.10	0.067	0.70	0.47
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
Trichloroethene	0.10	0.072	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.27	0.19
o-Xylene	0.10	0.076	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20268 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130



Air Toxics

Client Sample ID: Duplicate

Lab ID#: 1603071-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031022sim	Date of Collection:	3/2/16 8:28:00 AM	
Dil. Factor:	1.00	Date of Analysis:	3/10/16 04:00 PM	
		Date of Extraction:	3/10/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.083	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.065	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.10	0.15	0.15
1,4-Dichlorobenzene	0.10	0.098	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.063	0.23	0.15
4-Methyl-2-pentanone	0.20	0.15	Not Detected	Not Detected
Acetone	0.20	0.13	0.37	0.24
Benzene	0.40	0.25	0.63	0.40
Carbon Tetrachloride	0.10	0.074	0.56	0.42
Chlorobenzene	0.10	0.073	Not Detected	Not Detected
Chloroform	0.10	0.066	Not Detected	Not Detected
Cyclohexane	0.10	0.092	0.12	0.11
Ethanol	1.0	0.49	Not Detected	Not Detected
Ethyl Acetate	0.40	0.26	Not Detected	Not Detected
Ethyl Benzene	0.10	0.073	0.12	0.090
Heptane	0.10	0.086	0.28	0.24
Hexane	0.10	0.076	0.38	0.29
Methyl tert-butyl ether	0.10	0.077	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.088	Not Detected	Not Detected
Styrene	0.10	0.082	Not Detected	Not Detected
Toluene	0.10	0.067	0.97	0.66
Tetrachloroethene	0.10	0.084	0.41	0.35
Trichloroethene	0.10	0.072	Not Detected	Not Detected
m,p-Xylene	0.10	0.071	0.34	0.24
o-Xylene	0.10	0.077	0.12	0.090

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20044 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130



Air Toxics

Client Sample ID: TRIP BLANK**Lab ID#: 1603071-07A****VOCS BY PASSIVE SAMPLER - GC/MS**

File Name:	c031023sim	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 3/10/16 04:24 PM		
		Date of Extraction: 3/10/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.078	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.075	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.093	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.091	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.059	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	Not Detected	Not Detected
Benzene	0.40	0.23	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.069	Not Detected	Not Detected
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.062	Not Detected	Not Detected
Cyclohexane	0.10	0.086	Not Detected	Not Detected
Ethanol	1.0	0.46	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	Not Detected	Not Detected
Heptane	0.10	0.080	Not Detected	Not Detected
Hexane	0.10	0.070	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.072	Not Detected	Not Detected
Naphthalene	0.10	0.19	Not Detected	Not Detected
Propylbenzene	0.10	0.082	Not Detected	Not Detected
Styrene	0.10	0.076	Not Detected	Not Detected
Toluene	0.10	0.063	Not Detected	Not Detected
Tetrachloroethene	0.10	0.079	Not Detected	Not Detected
Trichloroethene	0.10	0.067	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	Not Detected	Not Detected
o-Xylene	0.10	0.072	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21489 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1603071-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031008sim	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 3/10/16 10:19 AM		
		Date of Extraction: 3/10/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.078	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.075	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.093	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.091	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.059	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	Not Detected	Not Detected
Benzene	0.40	0.23	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.069	Not Detected	Not Detected
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.062	Not Detected	Not Detected
Cyclohexane	0.10	0.086	Not Detected	Not Detected
Ethanol	1.0	0.46	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	Not Detected	Not Detected
Heptane	0.10	0.080	Not Detected	Not Detected
Hexane	0.10	0.070	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.072	Not Detected	Not Detected
Naphthalene	0.10	0.19	Not Detected	Not Detected
Propylbenzene	0.10	0.082	Not Detected	Not Detected
Styrene	0.10	0.076	Not Detected	Not Detected
Toluene	0.10	0.063	Not Detected	Not Detected
Tetrachloroethene	0.10	0.079	Not Detected	Not Detected
Trichloroethene	0.10	0.067	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	Not Detected	Not Detected
o-Xylene	0.10	0.072	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21489 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1603071-09A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031006sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/10/16 09:30 AM
		Date of Extraction:	3/10/16

Compound	%Recovery	Method Limits
1,1,2,2-Tetrachloroethane	95	70-130
1,1,1-Trichloroethane	104	70-130
1,2-Dichloroethane	90	70-130
1,2,4-Trimethylbenzene	94	70-130
1,4-Dichlorobenzene	84	50-110
2-Butanone (Methyl Ethyl Ketone)	88	70-130
4-Methyl-2-pentanone	96	70-130
Acetone	74	70-130
Benzene	80	70-130
Carbon Tetrachloride	105	70-130
Chlorobenzene	91	70-130
Chloroform	75	70-130
Cyclohexane	106	70-130
Ethanol	44 Q	50-130
Ethyl Acetate	90	70-130
Ethyl Benzene	102	70-130
Heptane	93	70-130
Hexane	98	70-130
Methyl tert-butyl ether	89	70-130
Naphthalene	13	5-80
Propylbenzene	100	70-130
Styrene	56	20-100
Toluene	96	70-130
Tetrachloroethene	96	70-130
Trichloroethene	92	70-130
m,p-Xylene	97	70-130
o-Xylene	84	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1603071-09AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c031007sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/10/16 09:55 AM
		Date of Extraction:	3/10/16

Compound	%Recovery	Method Limits
1,1,2,2-Tetrachloroethane	90	70-130
1,1,1-Trichloroethane	108	70-130
1,2-Dichloroethane	93	70-130
1,2,4-Trimethylbenzene	94	70-130
1,4-Dichlorobenzene	83	50-110
2-Butanone (Methyl Ethyl Ketone)	84	70-130
4-Methyl-2-pentanone	96	70-130
Acetone	73	70-130
Benzene	73	70-130
Carbon Tetrachloride	108	70-130
Chlorobenzene	88	70-130
Chloroform	73	70-130
Cyclohexane	99	70-130
Ethanol	42 Q	50-130
Ethyl Acetate	91	70-130
Ethyl Benzene	98	70-130
Heptane	96	70-130
Hexane	87	70-130
Methyl tert-butyl ether	91	70-130
Naphthalene	10	5-80
Propylbenzene	99	70-130
Styrene	53	20-100
Toluene	94	70-130
Tetrachloroethene	94	70-130
Trichloroethene	91	70-130
m,p-Xylene	96	70-130
o-Xylene	85	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130